

AMENDMENTS TO THE CLAIMS

Please amend claims 1, 9, 18, and 21 and add new claims 26 and 27 as set forth in the Listing of Claims section of this paper.

LISTING OF CLAIMS

Claims:

1. (Currently amended) A high-density circuit module comprising:
a first CSP;
a second CSP disposed above the first CSP in stacked disposition;
a first form standard disposed, in substantial part, above the first CSP;
flex circuitry connecting the first and second CSPs and positioned to be, in part, beneath the first CSP and, in part, above the first form standard and beneath the second CSP, the flex circuitry comprising a first side and a second side and a covercoat on each of the first and second sides; and
at least one metallic bond attaching the flex circuitry and the first form standard.
2. (Original) The high-density circuit module of claim 1 further comprising a second form standard disposed, in substantial part, above the second CSP.
3. (Original) The high-density circuit module of claim 1 in which the flex circuitry is comprised of a first flex circuit and a second flex circuit which are each attached to the first form standard with at least one metallic bond.
4. (Original) The high-density circuit module of claim 1 further comprising a second form standard and in which the flex circuitry is comprised of a first flex circuit and a second flex circuit which are each attached to the first form standard with at least one metallic bond.
5. (Original) The high-density circuit module of claim 1 in which the metallic bond comprises tin and gold.

6. (Original) The high-density circuit module of claim 1 in which the metallic bond is created by combining a first metallic material applied to the first form standard and a second metallic material from which the flex circuitry is comprised.

7. (Original) The high-density circuit module of claim 6 in which the combining of the first metallic material and the second metallic material is achieved through a selected application of heat.

8. (Original) The high-density circuit module of claim 7 in which the selected application of heat is achieved with localized friction heating.

9. (Currently amended) A high-density circuit module comprising:
a first CSP;
a second CSP stacked above the first CSP;
a first form standard associated with the first CSP; ~~and~~
a second form standard associated with the second CSP; and
flex circuitry comprising a first side and a second side and a covercoat on each of the first and second sides.

10. (Original) The high-density module of claim 9 further comprising flex circuitry connecting the first and second CSPs.

11. (Original) The high density module of claim 10 in which the flex circuitry is comprised of first and second flex circuits.

12. (Original) The high-density module of claim 10 in which the flex circuitry is attached to the first form standard with at least one metallic bond.

13. (Original) The high-density module of claim 12 in which the metallic bond is comprised of a first metallic material and a second metallic material.

14. (Original) The high-density module of claim 13 in which the first metallic material is comprised of tin and the second metallic material is comprised of gold.

15. (Original) The high-density module of claim 12 in which the metallic bond is realized by selective application of heat.

16. (Original) The high-density module of claim 13 in which the flex circuitry is comprised of a first flex circuit and a second flex circuit and each of the first and second flex circuits is attached to the first form standard with at least one metallic bond.

17. (Original) The high-density module of claim 10 in which the flex circuitry is attached to the first form standard with adhesive.

18. (Currently amended) A method creating a high-density circuit module comprising the steps of:

providing a form standard

providing first and second CSPs;

attaching the form standard to the first CSP;

applying a first metallic material to at least one part of the first form standard;

providing flex circuitry comprising a first side and a second side and a covercoat on each of the first and second sides with an area where flex metallic material is exposed;

disposing the flex circuitry adjacent to the first form standard to create an area of contact between the flex metallic material and the first metallic material;

selectively applying heat to the area of contact.

19. (Original) The method of claim 18 further comprising the step of using vibration to perform the step of selectively applying heat to the area of contact.

20. (Original) The method of claim 18 in which the first metallic material is comprised of tin.
21. (Currently amended) A unit for use in a stacked circuit module comprising:
a CSP;
a form standard attached to the CSP; and
flex circuitry attached to the form standard and comprising a first side and a second side and a covercoat on each of the first and second sides.
22. (Original) The unit of claim 21 in which the flex circuitry is comprised of a first flex circuit and a second flex circuit.
23. (Original) The unit of claim 21 in which the flex circuitry is attached to the form standard with at least one metallic bond.
24. (Original) The unit of claim 23 in which the metallic bond is comprised of at least two metals.
25. (Original) The unit of claim 21 in which the flex circuitry is comprised of first and second flex circuits, each of which is attached to the form standard with at least one metallic bond.
26. (New) A high-density circuit module comprising:
a first CSP;
a second CSP disposed above the first CSP in stacked disposition;
a first form standard disposed, in substantial part, above the first CSP;
flex circuitry connecting the first and second CSPs and positioned to be, in part, beneath the first CSP and, in part, above the first form standard and beneath the second CSP, the flex circuitry comprising at least two conductive layers; and
at least one metallic bond attaching the flex circuitry and the first form standard.

27. (New) A unit for use in a stacked circuit module comprising:
a CSP;
a form standard attached to the CSP; and
flex circuitry attached to the form standard and comprising at least two conductive layers.